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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/988,670	11/20/2001	Kunio Fukai	Q67306	8998

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Washington, DC 20037-3202

EXAMINER

ESTRADA, ANGEL R

ART UNIT	PAPER NUMBER
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2831

DATE MAILED: 07/21/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Applicati n No.

09/988,670

Applicant(s)

FUKAI ET AL.

Examiner

Angel R. Estrada

Art Unit

2831

-- Th MAILING DATE of this communication app ars on th cover she t with th correspond nce addr ss --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 June 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) 1 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 2-5 and 8-11 is/are rejected.
- 7) ☒ Claim(s) 6 and 7 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 November 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 3.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

Election/Restrictions

1. Claim 1 is withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected group, there being no allowable generic or linking claim. Election was made **without** traverse in Paper No. 6.

Drawings

2. Figures 12, 13 (a) and 13 (b) should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 2-5 and 8-11 are rejected under 35 U.S.C. 102(a) and 102 (e) as being anticipated by Fukuyo et al (US 6,580,200).

Regarding claim 2, Fukuyo et al disclose a method of fabricating an arc tube for a discharge lamp (see figure 1) including: forming shroud joining portions (see figure 6a) with circular cross sections on front and rear end sides of an arc tube body (see figure 6); inserting the arc tube body (2 or G1) into a shroud (3 or G2); heating predetermined portions of the shroud wherein the predetermined portions are modified in a direction of reducing diameters thereof as an effect of the heating (see figure 6a-6c); and joining the predetermined portions to the shroud joining portions on the front and rear end sides of the arc tube body (see figure 6c).

Regarding claim 3, Fukuyo et al disclose the method of fabricating an arc tube for a discharge lamp (see figure 1), wherein the joining step is performed by a welding process (see figure 6a or column 8 lines 1 and 14-15).

Regarding claim 4, Fukuyo et al disclose the method of fabricating an arc tube for a discharge lamp (see figure 1), wherein the predetermined portions include a front end side and a rear end side of the shroud (see figures 6a-6c), and wherein the rear end side of the shroud (3 or G2) is welded to the rear end side of the arc tube body (2 or G1), and the front end side of the shroud (3 or G2) is welded to the front end side of the arc tube body (column 8 lines 1 and 14-15).

Regarding claim 5, Fukuyo et al disclose the method of fabricating an arc tube for a discharge lamp (see figure 1), wherein the shroud joining portions (see figure 1, 6a-6c) include a cylindrical non-pinch seal portion (see figure 1) in an extended manner at

backward portion of a first pinch seal portion (202b) on the rear end side of the arc tube body (2), and a shrink seal portion (see figure 1 or column 8 line 13-16) adjacent to a forward portion of a second pinch seal portion (202a) on the front end side of the arc tube body (2), and the joining step includes joining a rear end side of the shroud (3) to the cylindrical non-pinch seal portion (see figure 1) on the rear end side of the arc tube body (2 or G1), and joining a front end side of the shroud (3) to the shrink seal portion (see figure 1) on the front end side of the arc tube body (2).

Regarding claim 8, Fukuyo et al disclose the method of fabricating an arc tube for a discharge lamp (see figure 1), further including forming the arc tube body (2 or G1) by: forming a bulb (201) at a portion of a tube; inserting a first electrode assembly (A1, see figure 5b) from one end side of the tube provided with the bulb (see figure 5b); pinch-sealing a first portion of the tube between the one end side and the bulb, and near the bulb (see figure 5d); supplying a predetermined filling material to the bulb (K); inserting a second electrode assembly (A2) from the other end side of the tube and holding the second electrode assembly (A2) at a predetermined position (see figure 5d), supplying an inactive gas (column 7 line 35-36) within the bulb (201); pinch-sealing or tipping off a second portion of the tube near the other end side of the tube to seal the inactive gas within the tube (see figure 5e); and pinch-sealing a third portion of the tube, between the other end side and the bulb, and near the bulb (see figure 5f).

Regarding claim 9, Fuyuko et al disclose the method of fabricating an arc tube for a discharge lamp (see figure 1), wherein prior to pinch-sealing of the third portion of the tube between the other end side and the bulb (201), and near the bulb, a seal expected

area near the bulb (201) is heated and molten to perform shrink sealing to form a shrink seal portion while cooling the bulb with a cooling medium (16a and 16b or see figure 5f), and thereafter, during the pinch-sealing, a bulb side of the shrink seal portion is pinch-sealed with a predetermined width (see figure 5f), thereby forming the pinch seal portion in the third portion of the tube adjacent to the shrink seal portion.

Regarding claim 10, Fuyuko et al disclose the method of fabricating an arc tube for a discharge lamp (see figure 1), wherein a negative pressure (P_o) is maintained within the shroud (3) while a rear end side of the shroud is joined to the rear end side of the arc tube body by welding, a welding expected area on a front end side of the shroud (see figure 6c) is heated, molten and softened, and a front end side of the shroud (3 or G2) is shrink-sealed to the shrink seal portion adjacent to the pinch seal portion (see figure 1 or column 8 line 14).

Regarding claim 11, Fuyuko et al disclose the method of fabricating an arc tube for a discharge lamp (see figure 1), wherein the shroud joining portions include a cylindrical non-pinch seal portion (see figure 1) in an extended manner at a forward portion of a pinch seal portion on the front end side of the arc tube body (see figure 1), and the joining step includes joining a front end side of the shroud (3) to the cylindrical non-pinch seal portion (see figure 1) on the front end side of the arc tube body (2), or to a circular cross-sectional portion of the front end side that includes the cylindrical non-pinch seal portion (see figure 1).

Allowable Subject Matter

4. Claims 6 and 7 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is an examiner's statement of reasons for allowance: The primary reasons for the indication of the allowability of claims 6 and 7 are:

Regarding claim 6 is the inclusion therein in combination as currently claimed of the limitation of the shroud joining portions including a cylindrical non-pinch seal portion provided with a circular flange portion on an outer periphery thereof in an extended manner at a backward portion of a pinch seal portion on the rear end side of the arc tube body; and the joining step includes joining the rear end side of the shroud to the circular flange portion on the rear end side of the arc tube body.

Regarding claim 7 is the inclusion therein in combination as currently claimed of the limitation of the cylindrical non-pinch seal portion including a circular flange portion on an outer periphery, and the rear end side of the shroud is joined to the circular flange portion on the rear end side of the arc tube body.

These limitations are found in claims 6 and 7, and are neither disclosed nor taught by the prior art of record, alone or in combination.

Conclusion

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Tanaka et al (US 6,287,163), Ohkawai et al (US 6,547,619),

Ohshiba et al (US 6,354,900), Takagaki (US 2003/0062839) and Tsuda et al (US 2002/0063503) disclose a method of fabricating an arc tube for a discharge lamp.

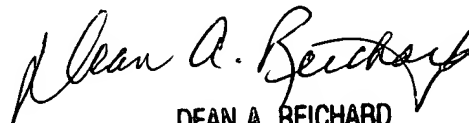
6. Any inquiry concerning this communication should be directed to Angel R. Estrada at telephone number (703) 305-0853. The Examiner can normally be reached on Monday-Friday (8:30 -5:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dean Reichard can be reached on (703) 308-3682. The fax numbers for the organization where this application or proceeding is assigned are (703) 872-9318 for regular communications and (703) 872-9319 for after final communication.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

AE

July 9, 2003

 7/14/03
DEAN A. REICHARD
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2800